What is claimed is:

1. A magnetic data embedding system, comprising:

a spindle motor having a shaft;

a master disk mounted on a shaft of the spindle motor, the master disk having magnetic data written on at least one side thereof;

a plurality of magnetic disks for receiving magnetic writing, the magnetic disks being integrally mounted in a stack on the shaft of the spindle motor, each magnetic disk having a top side and a bottom side;

at least one reading head for reading the magnetic data on the master disk;

a plurality of writing heads that are arranged in writing head groups, each writing head group including at least one of the writing heads, the writing head groups being associated with the top and bottom sides of the magnetic disks such that each writing head group has access to a respective one of the sides; and

at least one rotary positioner each integrally holding at least one reading head and at least some the groups of writing heads in a pivotable stack, the at least one rotary positioner being disposed adjacent the periphery of the stack of magnetic disks so that at least a plurality of the writing head groups can gain access to the same side of each of the magnetic disks for writing,

wherein the writing head groups on the same side of the magnetic disks carry out writing onto said same side in parallel with other writing head groups on said same side of the magnetic disks within respective assigned track ranges, the writing being carried out in response to the magnetic data read out by at least one reading head and modified magnetic data prepared on the basis of the magnetic data.

2. The magnetic data embedding system as claimed in claim 1, further comprising a unit which monitors the track addresses of the magnetic data written onto the magnetic disks, and inhibits writing of the if a monitored track address is found to be out of an assigned track range.

3. The magnetic data embedding system as claimed in claim 1, further comprising a unit which is provided for the rotary positioner for storing data to be written in data regions of the magnetic disks, provides data to the writing heads, and makes the writing heads carry out writing of the data to the data regions with the addresses.

4. The magnetic data embedding system as claimed in claim 1, wherein:

the at least one rotary positioner and at least one reading head comprise a plurality of rotary positioners and a plurality of reading heads, each of which is carried by a respective one of the rotary positioners,

each writing head group has a single writing head,

the reading head and each of the writing heads carried by the same rotary positioner are in correspondence, and

the reading head and each of the writing heads are so provided as to position on approximately the same radial positions of the master disk and the magnetic disks.

5. The magnetic data embedding system as claimed in claim 1, wherein:

the at least one rotary positioner and the at least one reading head comprise a plurality of rotary positioners and a plurality of reading heads, each of which is carried by a respective one of the rotary positioners, and

on the same rotary positioner, one of the reading heads is provided adjacent the master disk and each writing head group has a plurality of writing heads, which are disposed at approximately equal intervals in the radial direction of the magnetic disks.

6. The magnetic data embedding system as claimed in claim 1, wherein the master disk is produced by carrying out writing thereto with any of the heads, with the master disk being stacked.

7. The magnetic data embedding system as claimed in claim 1, wherein the master disk is produced by writing of magnetic information by magnetic printing.

8. A magnetic data embedding system, comprising:

a spindle motor having a shaft with an axis;

a master disk integrally mounted on a shaft of the spindle motor, the master disk having magnetic data including servo information written on at least one side thereof;

a plurality of magnetic disks for writing receiving magnetic writing, the magnetic disks being integrally mounted in a stack on the shaft of the spindle motor, each magnetic disk having a top side and a bottom side;

at least one reading head for reading the magnetic data on the master disk;

a plurality of writing heads that are arranged in writing head groups, each writing head group including at least one of the writing heads, the writing head groups being associated with the top and bottom sides of the magnetic disks such that each writing head group has access to a respective one of the sides;

at least one rotary positioner integrally holding the at least one reading head and the groups of writing heads in a pivotable stack, the at least one rotary positioner being turntable so that each of the reading heads and at least one of the writing heads are positioned on a common plane that substantially includes the axis of the shaft of the spindle motor, and being disposed adjacent the periphery of the stacked magnetic disks so that at least a plurality of the writing heads are presented to gain access to the same side of each of the magnetic disks;

a head position control unit provided for each of the at least one rotary positioners, the unit carrying out comparison of a target head position and a detected head position to turn the rotary positioner so that the difference between the target head position and the detected head position becomes a minimum and bringing the detected head position to be stably settled at the target head position, the target head position being externally given as a radial position on the master disk to be followed up by a specified reading head of the at least one reading head on the rotary positioner, and the detected head position being taken as a radial position of the reading head on the master disk, the radial position being obtained from the magnetic data read out by the reading head as an object to be followed up; and

an address correcting unit carrying out correction of at least a track address of items of address information in one of the magnetic data read out by the at least one

reading head on the master disk, and modified magnetic data prepared on the basis of the magnetic data, and producing finally written magnetic data one of corrected magnetic data and corrected modified magnetic data for a writing head corresponding to the reading head, the finally written magnetic data including at least a track address of the items of the address information corrected by a specified amount with reference to address correction data measured beforehand,

wherein each of the writing heads carries out writing of the finally written magnetic data, each being produced for the writing head itself, onto the side of the magnetic disk receiving the writing, corresponding to the writing head, in parallel with other writing side heads on the same side of the magnetic disks, with its own track range for writing being assigned.

9. The magnetic data embedding system as claimed in claim 8, further comprising a unit which monitors the track address of the finally written magnetic data, and which inhibits writing of the finally written magnetic data if a monitored track address is found to be out of a track range assigned to the writing head beforehand.

10. The magnetic data embedding system as claimed in claim 8, further comprising a unit which is provided for each rotary positioner for storing data to be written in data regions of the magnetic disks, provides data to the writing heads, and makes the writing heads carry out writing of the data to the data regions with the addresses.

11. The magnetic data embedding system as claimed in claim 8, wherein the address correcting unit comprises:

a first track difference correcting unit carrying out correction of track differences presented between track positions of magnetic heads, separately provided on any two of a plurality of the rotary positioners, on at least one side of the two rotary positioners; and

a second track difference correcting unit carrying out, on each of the rotary positioner sides, correction of track difference presented in each of the same rotary positioner between a track position of the at least one reading side head and each of track positions of a plurality of the writing side heads on each side of the magnetic disks served for writing, each of the writing side heads being in the above correspondence with each of the respective reading side heads.

12. The magnetic data embedding system as claimed in claim 11, wherein the address correction data to which the first track difference correcting unit refers are data obtained by:

in each pair of the rotary positioners of a plurality of the rotary positioners and on each side of the magnetic disk served for writing, making a specified writing side head, positioned on the side of the magnetic disk served for writing and provided on one side of a pair of the rotary positioners (hereinafter referred to as a "first rotary positioner"), write a specified line, with the reading side head as the object to be followed up on the first rotary positioner being made to follow up a specified track;

then, while changing a track to be followed up by the reading side head, as the object to be followed up, on the other one of the pair of the rotary positioners (hereinafter referred to as a "second rotary positioner"), making a specified writing side head, provided on the second rotary positioner side and positioned on the magnetic disks served for writing, position at the specified line; and

using at least a track difference at this time between the track position of the specified one of the reading side head on the first rotary positioner side and the track position of the specified one of the reading side head on the second rotary positioner side.

13. The magnetic data embedding system as claimed in claim 11, wherein the address correction data to which the second track difference correcting unit refers are data obtained by:

making one of a pair of the writing side heads (hereinafter referred to as a "first writing side head") of a plurality of the writing side heads, selected at least an object of the measurement on the side of the magnetic disk served for writing, write a specified line in each of the rotary positioners and on each side of the magnetic disk served for writing, with the reading side head as the object to be followed up being made to follow up a specified track (hereinafter referred to as a "first track") on the same rotary positioner;

then, while changing a track to be followed up by the reading side head as the object to be followed up, making the other writing side head of the pair (hereinafter referred to as a "second writing side head") position at the specified line;

making the reading side head as the object to be followed up read out a position of a track which the reading side head follows up (hereinafter referred to as a "second track") at this time;

taking the track position difference between the positions of the first track and the second track as the track position difference between the track of the first writing side head and the track of the second writing side head;

carrying out similar kinds of processing with pairs of writing side heads selected as objects of the measurement changed by turns to thereby obtain a track position difference between each of a plurality of the writing side heads (hereinafter referred to as a "first track position difference")on the side of the magnetic disk served for writing;

along with this, obtaining a track position difference between a plurality of the reading side heads corresponding to the first track position difference (hereinafter referred to as a "second track position difference"), when at least one reading side head presented on the master disk are provided as a plurality thereof;

using at least the first track position differences and the second track position differences when a plurality of the reading side heads are presented on the master disk on the rotary positioner; and

using at least the first track position difference when one reading head is presented on the master disk on the rotary positioner.

14. The magnetic data embedding system as claimed in claim 8, wherein:

the at least one rotary positioner and at least one reading head comprise a plurality of rotary positioners and a plurality of reading heads, each of which is carried by a respective one of the rotary positioners,

each writing head group has a single writing head,

the reading head and each of the writing heads carried by the same rotary positioner are in correspondence, and

the reading head and each of the writing heads are so provided as to position on approximately the same radial positions of the master disk and magnetic disks.

15. The magnetic data embedding system as claimed in claim 8, wherein:

the at least one rotary positioner and at least one reading head comprise a plurality of rotary positioners and a plurality of reading heads, each of which is carried by a respective one of the rotary positioners, and

on the same rotary positioner, a plurality of the reading heads are disposed at approximately equal intervals in the radial direction with respect to the master disk, and a plurality of the writing heads equal in number to the reading heads are contained in each reading head group and disposed at approximately equal intervals in the radial direction of the magnetic disks.

16. The magnetic data embedding system as claimed in claim 8, wherein:

the at least one rotary positioner and at least one reading head comprise a plurality of rotary positioners and a plurality of reading heads, and

on the same rotary positioner, one of the reading heads is provided adjacent eh master disk and each of a plurality of writing head groups has writing heads,

which are disposed at approximately equal intervals in the radial direction of the magnetic disks.

17. The magnetic data embedding system as claimed in claim 8, wherein the master disk is produced by carrying out writing thereto with any of the heads, with the master disk being stacked.

18. The magnetic data embedding system as claimed in claim 8, wherein the master disk is produced by writing of magnetic information by magnetic printing.

19. A magnetic data embedding system comprising:

a spindle motor having a shaft;

a master disk integrally mounted on a shaft of the spindle motor, the master disk magnetic data on at least one side thereof;

a plurality of magnetic disks for receiving magnetic writing, the magnetic disks being integrally mounted in a stack on the shaft of the spindle motor, each magnetic disk having a top side and a bottom side;

a reading head for reading the magnetic data on the master disk;

writing heads having one to one access to each side of each of the magnetic disks; and

a plurality of rotary positioners each integrally holding the reading head and the writing heads in a pivotable stack, and being disposed at the periphery of the stack of magnetic disks,

wherein the writing heads correspond to the reading head are mounted on the rotary positioners to carry out writing of one of the magnetic data and magnetic data prepared on the basis of the magnetic data, read out by the reading head, onto the magnetic disks, the writing being carried out in parallel with other writing heads on the same side of the magnetic disks within a track range for writing that is assigned to each of the writing heads.

20. The magnetic data embedding system as claimed in claim 19, wherein the master disk is produced by carrying out writing thereto with any of the heads on the rotary positioner, with the master disk being stacked.

21. The magnetic data embedding system as claimed in claim 19, wherein the master disk is produced by writing of magnetic information by magnetic printing.

22. A magnetic data embedding system, comprising:

a spindle motor;

a master disk integrally mounted on a shaft of the spindle motor, the master disk having servo information written on at least one side thereof;

a plurality of magnetic disks for receiving magnetic writing, the magnetic disks being integrally mounted in a stack on the shaft of the spindle motor, each magnetic disk having a top side and a bottom side;

read-only heads for reading the servo information on the master disk;

servo heads provided in one to one correspondence adjacent each side of each of the magnetic disks for carrying out writing one of the servo information and modified servo information prepared on the basis of the servo information;

a plurality of rotary positioners each integrally holding one of the read-only heads and some of the servo heads in a stack, the rotary positioners being disposed adjacent the periphery of the stack of magnetic disks;

a head position control unit provided for each of the rotary positioners, the unit carrying out comparison of a target head position and a detected head position to turn the rotary positioner so that the difference between the target head position and the detected head position becomes a minimum, and bringing the detected head position to be stably settled at the target head position, the target head position being externally given as a radial position on the master disk to be followed up by the read-only head, and the detected head position being taken as a radial position of the read-only head on the master disk, the radial position being obtained from the servo information read out by the read-only head;

a servo pattern generator provided for each of the rotary positioners and transmitting said one of the servo information and the modified servo information obtained from the servo information to each of the servo heads on the same rotary positioner and same side of the magnetic disks in synchronism with a clock signal, the clock signal being obtained from the servo information read by the read-only head held by the same rotary positioner;

a head position error storing unit storing head position errors, in the radial direction of the magnetic disks, among the servo heads gaining access to the same

side of the magnetic disks in each of the rotary positioners, the errors being stored for each side of the magnetic disks; and

a track position correcting unit making at least any one of the servo pattern generators transmit one of the servo information and the modified servo information to corresponding servo heads, a track address of the information being corrected by using the head position error corresponding to each of the servo heads,

wherein each of the servo heads in each of the rotary positioners, with a track range for writing being assigned to the servo head, is made to carry out, in parallel with other servo heads, writing of one of the correct servo information and the correct modified servo information in the track range assigned to the servo head on each side of the magnetic disk corresponding to the servo head by keeping a correct track space between an adjacent track range.

23. The magnetic data embedding system as claimed in claim 22, further comprising a unit carrying out monitoring of a target head position of the read-only head corresponding to each of the servo heads writing the one of the servo information and the modified servo information, each with a corrected address, by checking the head position error corresponding to each of the servo heads, and allowing each of the servo heads to carry out writing only when each of the servo heads is in the track range assigned thereto.

24. The magnetic data embedding system as claimed in claim 22 wherein, with a read-only head on any of the rotary positioners (hereinafter referred to as a "first read-only head") being made stably settled on a track (hereinafter referred to as

a "first track") on the master disk determined by a target head position given to the first read-only head by the head position error storing unit, a servo head, as an object of measurement corresponding to the first read-only head, (hereinafter referred to as a "first servo head") writes a specified signal on the magnetic disk served for writing,

next, a servo head, provided on another rotary positioner (hereinafter referred to as a "second servo head") side and positioned on the side of the magnetic disk served for writing, detects the signal to position the second servo head at the position of the signal,

then, in this state, a read-only head corresponding to the second servo head (hereinafter referred to as a "second read-only head") reads out servo information from the master disk, from which information a position of a track is detected at which the second read-only head is stably settled on the master disk (hereinafter referred to as a "second track"), and

finally, the difference between the positions of the first and second tracks is stored as a head position error between the first and second servo heads on the side of the magnetic disk served for writing.

25. The magnetic data embedding system as claimed in claim 22, wherein the track position correcting unit is a unit that corrects an output of the servo pattern generator on one side of the rotary positioners provided with servo heads carrying out writing of one of the servo information and the modified servo information, to which heads track ranges adjacent to each other are separately assigned.

26. The magnetic data embedding system as claimed in claim 22, further comprising a unit which is provided for each of the servo pattern generators for storing data to be written in a data region of the magnetic disk served for writing, provides data to the servo pattern generator, the data corresponding to an address of one of the servo information and the modified servo information transmitted by the servo generator to each of the servo heads corresponding thereto, and makes writing of the data to the data region corresponding to the address carried out.

27. The magnetic data embedding system as claimed in claim 22, wherein the master disk is produced by carrying out writing thereto with any of magnetic heads on the rotary positioner with the master disk being in the staked state.

28. The magnetic data embedding system as claimed in claim 22, wherein the master disk is produced by writing of magnetic information by magnetic printing.